SECTION 2

SITE DESCRIPTION

2.1 FACILITY INFORMATION

Project Name: Camp Bonneville Military Reservation

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2.2 SITE DESCRIPTION

2.2.1 Site Location

2.2.1.1 The 3,840-acre Camp Bonneville site is located northeast of Vancouver, Washington, in the southeastern region of Clark County (Figure 2.1). The property is approximately five miles from Vancouver, Washington and approximately seven miles north of the Columbia River. Camp Bonneville is located along the western foothills of the Cascade Mountain Range, with Camp Hill and Little Elkhorn Mountain to the northwest, Munsell Hill to the west, and Little Baldy Mountain to the south.

2.2.1.2 Vehicular access to Camp Bonneville is restricted to a single entrance. The entrance is located on SE 232nd Ave. and enters the site from the west at the Camp Killpack cantonment. The entrance is gated and monitored by the facilities managers.

2.2.2 Climate

2.2.2.1 The Camp Bonneville area has mild, wet winters and moderately warm, dry summers. January is the coldest month, with an average temperature of approximately 38 degrees Fahrenheit (°F). July and August are the warmest months, with an average temperature of approximately 69°F. Typically, only 26 days a year experience temperatures below freezing, and 7 days have temperatures above 90°F.

2.2.2.2 Precipitation in the area is typically caused by the passage of low-pressure zones along a path from the north Pacific Ocean eastward during the winter and spring. The rainy season usually begins in late-September to mid-October and continues through March or April. An average of 154 days a year have measurable amounts of rainfall, with an average annual precipitation of approximately 47 inches. Annual snowfall in the Vancouver area averages about 8.4 inches. The average snow depth is typically only 2 or 3 inches, with continuous snow cover lasting one to three days at a time (USACE, 1999).

Figure 2.1 Site Location Map

Based on published, conservative ("worst case") values for nearby Portland, Oregon, the depth of frost penetration for Camp Bonneville was determined to be 14-inches (USACE, 2000).

2.2.3 Physiography

2.2.3.1 The majority of the Camp Bonneville property consists of moderately steep, heavily vegetated foothill slopes of the Cascade Ranges. The Lacamas Creek valley floor is a relatively narrow floodplain, and ranges in elevation from approximately 360 feet above mean sea level (msl) in the central portion of the site to approximately 290 feet msl on the southwestern end of the property. The adjacent slopes rise to elevations of between 1,000 and 1,500 feet within the Camp Bonneville boundaries.

2.2.3.2 Lacamas Creek flows southwestward from the confluence of North Fork Creek and East Fork Creek in the north-central part of Camp Bonneville, to the southwestern corner of the property. It is fed by David Creek and Buck Creek, which drain the southeastern part of the property. From the southwestern property boundary, Lacamas Creek flows southwestward toward the town of Proebstel, where it turns toward the southeast and continues to its confluence with the Columbia River at the town of Camas.

2.2.3.3 The two cantonments, Camp Killpack and Camp Bonneville, are located on the Lacamas Creek valley floor. The cantonment areas are accessible by a paved roadway through the entrance of Camp Bonneville. Access within the camp is limited to a few all-season gravel roads, most of which are on the valley floor, and dirt roads leading into perimeter areas in the northern, southern, and eastern portions of the facility. Access to the camp is currently restricted to law enforcement, military personnel, and others on official business.

2.2.4 Regional Geology

2.2.4.1 Camp Bonneville is situated along the structural and physiographic boundary between the western flank of the southern Cascade Mountains and the Portland-Vancouver Basin. Four distinctive geologic units underlie Camp Bonneville:

- Quaternary floodplain and stream channel alluvium and lacustrine deposits, which mantle the Lacamas Creek valley floor;
- A Quaternary landslide deposit formed in bedrock on the steep slope along David Creek;
- A thick sequence of Quaternary to Pliocene-age gravel, fine-grained sand, and cobbly and bouldery sand known as the Troutdale Formation, which underlies areas to the west of the Bonneville cantonment; and,
- Oligocene-age volcanic bedrock, which is exposed at the surface in the eastern part of the Camp.

2.2.4.2 The alluvium underlying the Lacamas Creek valley floor was deposited as stream channel, floodplain, and alluvial fan sediments. This type of deposit typically varies significantly in grain size, both laterally and vertically, depending on localized depositional environments.

2.2.4.3 A large landslide deposit has been mapped on the steep northwest-facing slope of Lacamas Creek above the Camp Bonneville cantonment (Phillips, 1987). The age of the landslide is not known, although its topographic expression suggests that it is ancient. The slide involved displacement of surface soils and bedrock over approximately 100 acres of land adjoining David Creek. The landslide deposits extended from an elevation of about 1,000 feet at the headwall of the slide to an elevation of about 500 feet at its toe along David Creek.

2.2.4.4 The Troutdale Formation, which underlies a portion of the western part of the camp, ranges from a poorly consolidated sand and gravel to a cemented conglomerate in its upper part. There is considerable variation in the lithology and thickness of the Troutdale Formation. In general, the formation thins eastward against the underlying bedrock, and the lower part of the formation reportedly is typically coarser grained toward the east (Mundorff, 1964).

2.2.4.5 Bedrock is exposed at the surface in the eastern part of the Camp. The bedrock is composed of Oligocene-age volcanic rocks, including andesite and basaltic flows, minor flow breccias, pyroclastics, and tuffs, with some interbedded sedimentary rocks. Andesite is the most common volcanic rock in the area. It generally ranges from medium to very fine grained, is commonly porphyritic, and is medium to brownish gray. This volcanic bedrock unit underlies the Lacamas Creek valley floor alluvial/lacustrine deposits, and the Troutdale Formation, where it is present.

2.2.5 Soils

2.2.5.1 The major soil type at Camp Bonneville is located on the slopes of the foothills. The slope of this surface is very steep and the surface layer is stony. The well drained and slowly permeable soil has a high available water capacity. The upland soils in this area are shallow, stony, and poorly consolidated. The lowland soils surrounding Lacamas Creek tend to have higher clay content. Surface runoff is rapid and the potential hazard of erosion is great on bare surfaces.

2.2.5.2 In a typical soil profile from surface to depth, Camp Bonneville soils consist of: thin, friable, dark reddish-brown clayey sandy silt; firm, reddish-brown heavy clayey sandy silt; and a very firm, dark-brown gravely clayey-sandy-silt. The majority of soil at the site is a stony, dark reddish-brown clayey-sandy-silt. The bedrock is composed of basalt, and the depth to basalt bedrock differs as the topography changes. Generally, as the slope increases, the bedrock depth becomes shallower.

2.2.6 Hydrology

2.2.6.1 The existing water supply wells in the Camp Bonneville area appear to draw groundwater from volcanic rock. The volcanic rock typically is a poor aquifer. At places

the rock is weathered to depths of several tens of feet, and a considerable volume of water may be stored in the saturated subsoil. Wells drilled into the unweathered volcanic rock typically yield only enough water for limited domestic use. In some cases, groundwater may be obtained from the vesicular, broken, and brecciated upper part of an individual lava flow, immediately beneath the base of the overlying flow.

2.2.6.2 Shallow groundwater appears to generally conform to site topography. The water table is typically within a few feet of the surface in the Lacamas Creek valley area. Iron staining observed in the soil profile above the water table provides an indication that the groundwater beneath the valley floor is very near the ground surface during the rainy season. The water table aquifer appears to fluctuate only a few feet in depth, rising in the fall through spring during the rainy season, and falling during the drier summer months.

2.2.7 Surrounding Land Use and Populations

2.2.7.1 Surrounding Land Use

2.2.7.1.1 Camp Bonneville is located entirely within Clark County, which is one of the fastest growing counties in the state of Washington. The land uses surrounding Camp Bonneville are predominantly agricultural, residential, and forestry. The current zoning around Camp Bonneville is FR-80 (forest zoning with an 80-acre minimum lot size). Neighboring properties are zoned FR-80, FR-40, R-10 (rural estate zoning with minimum 10 acre lots), and R-5. As Clark County has grown, so has the expansion of residential development near Camp Bonneville. Although current zoning permits nothing smaller than a five-acre lot size, many residents own smaller lots. These residents obtained their property prior to the adoption of the current standards.

2.2.7.1.2 The northeastern boundary of the camp borders with the Yacolt Burn State forest, which is managed by the Washington State Department of Natural Resources (DNR). The Livingston Quarry is a gravel mining operation that also exists as an adjacent land use activity along the southern boundary. Livingston Cemetery (two acres) is just south of the camp's access road and outside of the main gate along the western property boundary.

2.2.7.2 Population

2.2.7.2.1 Clark County, Washington had a population of 345,238 based on the 2000 U.S. Census Bureau Report. The Washington State Office of Financial Management estimates the Clark County 2004 population to be 383,300. The population growth rate of Clark County has it ranked as one of the fastest growing counties in Washington State. This growth rate is anticipated to continue in the future as the adjacent Portland, Oregon metropolitan area has "Urban Growth Boundaries" with restrictive zoning and land use controls. Clark County is subjected to less restrictive land development / growth management systems since it is located in Washington State and is not subject to the jurisdiction of Portland, Oregon. As such, Clark County is an outlet for population growth and development in the metro Portland, Oregon area. Clark County has a land area of 628 square miles, resulting in a population density of approximately 610 people per square mile, based on the 2004 population estimates.

2.2.8 Archeological and Historical Resources

2.2.8.1 Numerous surveys of local historic records and available studies in the general area have been conducted; however, no references were identified that included any activity or structure of historical or archeological significance (Parsons, 1998; Dalan, et al., 1981; Dornbos 1986a,b; Heritage Research Associates, 1986; Larson, 1980; U.S. Army Corps of Engineers, Seattle District, 1986; Washington Department of Natural Resources, Office of Archeology, 1994).

2.2.8.2 Woodward and Clyde (1996) conducted a review of the listings for National Historic Landmarks, the National Register of Historic Places, the State Register of Historic Places, and properties removed from the listings as of January 1993. This review did not reveal any listed resources on Camp Bonneville. The State Historic Preservation Officer determined that the Killpack cantonment was ineligible for inclusion on the National Register of Historic Places.

2.2.9 Ecosystems

2.2.9.1 Camp Bonneville is located at the tip of a portion of prairie habitat that extends into the foothills of the Cascade Mountains (Clark County, 1998). The Washington Cooperative Fish and Wildlife Research Unit of the University of Washington (Seattle) have mapped the area of Camp Bonneville. The majority of the site is in the "Westside western hemlock" vegetation zone (University of Washington, 1998). Forested areas on the installation occur on the higher elevations. These areas are densely wooded and provide an excellent habitat for existing wildlife. The aged stands on the installation contain Douglas fir that are generally less than 50 years old. Scattered stands of western red cedar and hemlocks that are remnants of the original plant community are located at Camp Bonneville. Other plant species include: vine maple (Acer circinatum), salmonberry (Rubus spectabilis), elderberry (Sambucus canadensis), hazelnut (Corylus sp.), salal (Gaultheria shallon), and sword fern. The Lacamas Creek valley floor is occupied by generally level to sloping lands; and consists of open fields, light to densely vegetated areas, and wetlands associated with small drainages and depressions in the floodplain of Lacamas Creek. The remnant stands of the valley floor habitat contain Garry oak (Quercus garryana), a dominant tree in former forests that once occupied the area. The valley floor of Camp Bonneville also includes trees such as the red alder (Alnus sp.), Oregon ash (Fraxinus sp.), Douglas fir (Pseudotsuga menziensii), big leaf maple (Acer macrophyllum), Garry oak, cottonwood (Populus deltoides), crabapple (Malus sp.), and willow (Salix sp.). Common understory species associated with this valley floor habitat include vine maple, salmonberry, Indian plum (Oemleria cerasiformis), snowberry (Symphoricarpos albus), and lady fern (Pentec 1995a in Clark County, 1998). Native grasses and small shrubs dominate the open fields at Camp Bonneville.

2.2.9.2 Camp Bonneville has been designated by Clark County as a "Forest Tier 1 Area". A Forest Tier 1 area is defined as an area that is potentially capable of sustaining "long-term production of commercially significant forest products" (Clark County, 1998). The U.S. Army has managed the forests and other vegetation on Camp Bonneville since 1957. Vegetation has been controlled by scarification and replanting

after fires that occurred in 1902, 1938, and 1951 (Hunter 1991 in Clark County, 1998). Timber has not been actively managed since 1981, however, a timber valuation report has been published for the area by Clark County (Forest Resource Management, Inc., November 12, 1997, in Clark County, 1998). Selective thinning has been recommended to utilize the forest resources on the site in order to help fund the reuse plan, optimize tree growth, simulate succession of the original Douglas fir community, maximize forest health, and minimize fire hazards. The Clark County forester conducted a detailed evaluation of the site in January 1999 in order to identify forest parcels that are essential to complete the reuse plan successfully. The county forester prioritized the site into five phases of activities. The first two phases identify areas along the western half of Camp Bonneville for thinning. Phase three identifies an area along the northern boundary east of the demolition area for selective thinning to promote future yields. Phases four and five were identified for thinning west of Lacamas Creek in the southwest portion of the site.

2.2.10 Wildlife

2.2.10.1 The majority of Camp Bonneville is forested area, interspersed with streams and open fields. This provides an excellent habitat for all forms of wildlife, including mammals, birds, reptiles, amphibians, and aquatic life. Detailed studies of wildlife of Camp Bonneville have not been published. The following information is based on a review of available literature and information provided in the Reuse Plan (Clark County, 1998).

2.2.10.2 A partial baseline survey of nesting raptors at Camp Bonneville was conducted by Stalmaster and Associates (1994). Thirty-three raptors were sighted, including red-tailed hawks, Northern harriers, great horned owls, turkey vultures, and a raven. A single osprey was observed, and was described as a probable migrant. Due to limitations on field research time and poor road conditions, complete coverage of Camp Bonneville was not possible (Stalmaster and Associates 1994).

2.2.10.3 Aquatic habitats in the site are associated with Lacamas, Main Stem, North and East Forks, Buck, and David Creeks. These creeks are expected to provide good quality aquatic habitats that support diverse fish and invertebrate populations based on the condition of the overall area.

2.2.11 Threatened and Endangered Species

2.2.11.1 An endangered species survey was performed in 1995 by Pentec Environmental, Inc. (Pentec) (1995a,b) (In Woodward and Clyde 1996). Field surveys were conducted by Pentec for amphibians, reptiles, mammals, songbirds, marsh birds, game birds waterfowl and water birds, raptors, fish, and rare plants. None of these surveyed species were defined as being federal- or state-listed as threatened or endangered. This species investigation has been updated in the USACE St. Louis District Final Archives Search Report (ASR) (1997). The St. Louis District conducted correspondence with the United States Fish and Wildlife Service (USFWS) and the Washington State Department of Fish and Wildlife regarding the occurrence of

threatened and endangered species on Camp Bonneville (USACE, 1997). Table 2.1 summarizes this information, as well as information on likely habitats for each species.

TABLE 2.1
LIST OF STATE AND FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES LIKELY TO OCCUR ON THE CAMP BONNEVILLE SITE*

Name	Status	Likely Habitat and Occurrence
Bald Eagle (Haliaeetus leucocephalus)	Federal Threatened Species	Occasional visitor through area
Northern Spotted Owl (Strix occidentalis)	Federal Endangered; State Endangered	Throughout site

*Based on Summary of Agency Correspondence provided in USACE Final Archives Search Report, 1997

2.2.11.2 Table 2.2 includes Federal Species of Concern, Federal Candidate Species, and Washington State Monitored Species. A Federal Species of Concern includes those species that were formerly classified as candidate species by the USFWS prior to 1997. A large number of candidate species were delisted in 1997 and reclassified as Species of Concern. Species of Concern are not formally "listed" species. However, these species are considered to be rare and are an important indicator of overall habitat quality of a particular area. The greater the number and diversity of these Federal Species of Concern, as well as their respective populations, reflects positively on the quality and viability of the habitat.

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2.3 PROPOSED FUTURE LAND USE

2.3.1 The Camp Bonneville closure presents Clark County with the opportunity to transform property allocated as surplus by the BRAC process into publicly available lands that will provide the community with significant educational, environmental, and recreational benefits.

TABLE 2.2
FEDERAL AND STATE SPECIES OF CONCERN LIKELY TO OCCUR ON THE CAMP BONNEVILLE SITE*

Name	Status	Likely Habitat and Occurrence
Bull Trout (Salvelinus confluents)	Federal Candidate Species	Lacamas Creek and tributaries (Buck Creek, David Creek)
Northwestern Pond Turtle (Clemmys marmorata marmorata)	Federal Species of Concern	Riparian areas along Lacamas Creek; Lacamas Creek
Larch Mountain Salamander (Plethodon larselli)	Federal Species of Concern	Wooded areas; Lacamas Creek
Cascades Frog (Rana cascadae)	Federal Species of Concern	Lacamas Creek and tributaries (Buck Creek, David Creek)
Spotted Frog (Rana pretiosa)	Federal Candidate Species	Lacamas Creek and tributaries (Buck Creek, David Creek)
Pacific Western Big-Eared Bat (Corynorhinus (Plecotus) townsendii townsendii)	Federal Species of Concern	Riparian areas; wooded areas
Long-eared myotis (Myotis evotis)	Federal Species of Concern	Riparian areas; wooded areas
Long-legged myotis (Myotis volans)	Federal Species of Concern	Riparian areas; wooded areas
Northern Goshwak (Accipter gentilis)	Federal Species of Concern	Throughout site
Olive-sided flycatcher (Contopus borealis)	Federal Species of Concern	Throughout site; riparian areas
Clackamas corydalis (Corydalis aquae-gelidae)	Federal Species of Concern	Riparian areas along creeks
Tailed frog (Ascaphus truei)	Federal Species of Concern, State Monitored Species	Moist habitats, wetlands, riparian areas, creeks
Cope's Giant Salamander (Dicamptodon copei)	State Monitored Species	Moist habitats; wetlands, riparian areas, creeks
Cascade Torrent Salamander (Rhyacotriton cascadae)	State Monitored Species	Moist habitats; wetlands, riparian areas, creeks

*Based on Summary of Agency Correspondence provided in USACE Final Archives Search Report, 1997

2.3.1 Camp Bonneville Local Redevelopment Authority

2.3.1.1 The Local Redevelopment Authority (LRA) is responsible for determining cost-effectiveness and feasibility of the land reuse plans for Camp Bonneville. In 1995, the Clark County Board of County Commissioners (BOCC), as a board of the LRA, appointed a five member Reuse Planning Committee (RPC) to oversee the reuse planning

process. RPC members include the County Parks Commission Chair, the County Planning Commission Chair, the Commissioner from the Camp Bonneville district, and two appointees from the Governor. After conducting public hearings, the RPC appointed representatives from the various reuse interest groups to six subcommittees to research the proposed reuse ideas and make recommendations to the RPC. Representatives from each of these subcommittees met as a steering committee.

2.3.1.2 The LRA subcommittees met regularly from February to June 1996, and in April 1997 they received approval for a land reuse planning grant from the Office of Economic Adjustment. From April 1997 through March 1998, the LRA subcommittees held meetings regarding the land reuse plan. After this process, the steering committees submitted a reuse plan to the RPC. After public hearings regarding the reuse scenario, modifications were made and the plan was submitted to the BOCC. After additional public hearings, a draft Camp Bonneville Land Reuse Plan (1998) was published.

2.3.2 Camp Bonneville Land Reuse Plan

2.3.2.1 Clark County has published an updated Preliminary Site Plan, Camp Bonneville Reuse Plan that identifies specific areas of Camp Bonneville for specific future uses (January 2003). This updated Land Reuse Site Plan graphic is shown on Figure 2.2. The central focus of the Draft Camp Bonneville Land Reuse Plan consists of approximately 1,200 acres along the western portion of the Camp and within the floodplain of the Lacamas Creek Valley. Other portions of the Camp radiating from the 1,200 acre park area will be utilized by the reuse plan for hiking and equestrian trails, wildlife habitat areas, and education study areas. The park area is designed to provide recreational opportunities for the local community and will be managed by Clark County. The recreational activities proposed in the reuse plan include, but are not limited to, the following:

- Recreational trails (hiking and equestrian use);
- Group picnic areas and picnic shelters;
- Amphitheater and stage (for outdoor school and small local events);
- Meadow area for group picnicking and recreational sports activities;
- Restroom facilities;
- Clark College/Law Enforcement Classrooms;
- Tent camping facilities;
- Recreational vehicle camping facilities;
- FBI, Law Enforcement, and Public firing range;
- Archery range;

Figure 2.2 Camp Bonneville Reuse Plan

- Park directors' residences;
- Vehicular access roads;
- Parking areas;
- Native American cultural center at the Bonneville cantonment area; and
- Environmental study area.

2.3.2.2 The primary economic resource at Camp Bonneville is its timber resources. The revenue from timber management may be used to fund site infrastructure costs for roads and utilities and could offset other costs associated with the development of the regional park. Camp Bonneville's significant forested areas provide a valuable wildlife habitat. In order to keep this habitat healthy, timber thinning is recommended. Timber thinning will maintain the health of the forest and reduce potential fire hazards, while providing revenue for the park operations.

2.3.2.3 Approximately 25 miles of trails, as well as approximately 2,700 acres of wildlife management areas will be maintained in the portion of the Camp Bonneville property located east of the Lacamas Creek valley. Access to these trails will be limited to hiking and equestrian use. The majority of these trails will consist of pre-existing four-wheel drive roads, but as additional funding becomes available, more trails may be added. The wildlife management area will be left in its current state.

2.4 SITE BACKGROUND

2.4.1 General

2.4.1.1 Camp Bonneville was utilized by the Department of Defense (DoD) for troop training from 1910 until 1995. The National Guard, Reserves, and the U.S. Air Force, as well as federal, state, and local law enforcement agencies, have trained personnel at the camp. Training exercises conducted at Camp Bonneville included weapons training using small arms, assault weapons, and field and air defense artillery. Camp Bonneville's location within the Northern Cascade Mountains provided a unique training area as the plateau was protected from wind by the surrounding Cascade foothills. The site geography is the reason this area was selected as a training area by the Department of the Army in the early 1900's.

2.4.1.2 The historical information regarding training operations and locations and previous MEC discoveries at Camp Bonneville was compiled from the Final Archives Search Report (USACE, 1997). The following sections provide a summary discussion of the past uses of Camp Bonneville.

2.4.2 Historical Summary

2.4.2.1 General

2.4.2.1.1 In 1910, the federal government entered into a lease with a purchase option on approximately 3,000 acres of land near Proebstel, Washington, which later became Camp Bonneville. The federal government's lease on the land expired in 1915, and the War Department acquired the land in 1918 by purchase and condemnation. The site was briefly declared surplus in the mid-1940s, but in May 1947, Camp Bonneville was removed from surplus status. In the early 1950's, the Defense Department leased an additional 840 acres from the State of Washington, and in 1957 the federal government returned 20 acres of the overall property to the State of Washington. From 1957 until placement on the Base Realignment and Closure (BRAC) list in 1995, the remaining 3,839 acres have remained under the military's jurisdiction.

2.4.2.2 Pre-World War II Era

2.4.2.2.1 Troops from Vancouver Barracks began to use land near Proebstel, Washington, for a target range in 1910 due to the near-level range floor that was protected from wind by the foothills of the Cascade Mountains. The plateau-valley (350 yards wide and 2,000 yards long) contained the Army's fourteen short-range and seven long-range small arms ranges. The federal government did not own the land at this time, but had an option on the property that it did not utilize for many years. In 1912, the government obtained another option, but after it expired in 1915, the army began conducting its target practice at an Oregon National Guard range near Clackamas, Oregon. The acquisition of the original reservation, consisting of approximately 3,000 acres, occurred in 1918 by purchase and condemnation. When the Army resumed activities at Camp Bonneville in 1918, the valley contained twenty-four targets. The installation was officially named Camp Bonneville in 1926. The records indicate that at some point prior to 1929, a machine gun range was also added to the training facilities at Camp Bonneville.

2.4.2.2.2 Camp Bonneville contains two separate cantonment areas. The Camp Bonneville cantonment area appears to have been built in the late 1920's, and in 1935 the Civilian Conservation Corps (CCC) built and occupied the Camp Killpack cantonment area. These facilities included barracks, kitchens and mess halls, an infirmary, latrines, administration and recreation buildings, and a library. Several organizations other than the garrison at Vancouver Barracks used the facilities at Camp Bonneville. Citizens Military Training Camps (CMTC) and the Reserve Officer Training Corps (ROTC) used the camp. The ROTC program prepared college students for a commission in the army and CMTC exposed high-school-aged males to military discipline and training.

2.4.2.3 World War II Era

2.4.2.3.1 Camp Bonneville continued to be used as a training area for the Vancouver Barracks during the Second World War. The camp reportedly housed Italian prisoners-of-war during this period. In 1946, the War Department declared the property excess. In May 1947 the military withdrew the camp from surplus citing a continuing need for its

training facilities. The ranges activated during the World War II era were 0.22-caliber, 0.30- caliber, and 0.45-caliber small arms ranges.

2.4.2.4 Post-World War II (1950s Era)

2.4.2.4.1 The Army refurbished many of the buildings and systems at the cantonment areas along with the ranges on the installation in 1950. This project was performed in preparation for training by the U.S. Army Reserve units in southern Washington and northern Oregon. During this time, the National Guard and the Marine Corps also expressed an interest in training at Camp Bonneville.

2.4.2.4.2 In the early 1950's, the Defense Department arranged to lease an additional 840 acres from the State of Washington DNR to expand the training facilities at Camp Bonneville. The Army returned twenty acres of the leased land to the DNR in 1957. This transfer marked the last significant real estate action at Camp Bonneville. In 1959, Vancouver Barracks became a sub-installation of U.S. Army, Fort Lewis (Tacoma, Washington). As a result, Fort Lewis assumed responsibility for Camp Bonneville.

2.4.2.4.3 By 1959, the property inventory included a known distance range, a pistol range (20 targets), a submachine gun range (21 targets), a live hand grenade range, and a mortar training range. Targets and target storage buildings for machine gun and anti-aircraft ranges were inventoried; however, the actual ranges could not be located. Two demolition areas of unknown chronology are also mentioned (USACE, 1997). They were approximately located in the southwest quadrant of the site along Lacamas Creek and in the northwest quadrant of the site near Little Elkhorn Mountain. These demolition areas had been used for destruction of unserviceable munitions since the late 1950's. Since 1993, the destruction of unserviceable munitions by any method (burning or detonation) has not been permitted.

2.4.2.5 Late 1960 through 1995

2.4.2.5.1 Camp Bonneville provided training areas for a variety of military units as well as federal, state, and local law enforcement agencies until selection for closure under the BRAC process in 1995. From 1969 to 1985, artillery units had conducted live firing exercises about twice a year with each training session resulting in the firing of approximately 50 rounds.

2.4.2.5.2 During the 1970's, the military switched to sub-caliber rounds for training purposes. Additional training in maneuvers, bivouacking, and tactics were practiced on the many preexisting training areas at Camp Bonneville, and occasionally vehicles would support this training with the use of smoke or riot control agents. These training areas utilized land from previously established ranges. The literature does not indicate the installation of any new ranges during this period. After receiving its BRAC designation in 1995, all active training ceased at the site with the exception of the continued use of the FBI small arms range by local, State and Federal Law enforcement personnel.

2.4.2.6 1987 through 1991

2.4.2.6.1 During the period from 1987 to 1991, three new ranges were introduced at Camp Bonneville. The ranges included an M16 rifle range and two M203 ranges. The M203 ranges were used for troop training in the use of 40mm rifle grenades. One range was reportedly used solely for inert, practice 40mm training, while the second range was used for high explosive (HE) 40mm training.

2.4.2.7 Chemical Agent Training

2.4.2.7.1 Several documents from the 1930's are discussed in the ASR concerning the expenditure of two gas identification sets from Vancouver Barracks Supply (Assistant Adjutant General 1935; Office of the Chief of Chemical Warfare Service 1936; Chemical Warfare Service 1937; Headquarters, Ninth Corps Area, 1937). These documents refer to the use of one set per instance, but they do not specify the location or extent of the training involved. Camp Bonneville had two gas training facilities. One of these facilities was located adjacent to the Camp Bonneville cantonment area and the other was located to the southeast in former Training Area #15. Camp Bonneville also reportedly had a 100x100 yard mustard training area which may have been in the vicinity of the "old gas chamber" identified by the Environmental Baseline Survey (EBS) (Woodward-Clyde, 1996), but the exact location of the mustard training area is unknown. This "old gas chamber" was destroyed by fire in the 1970's. There is no direct evidence that chemical agent training activities were conducted at Camp Bonneville. The available information indicates that only tear gas was used in the two former gas training facilities and the mustard training area at Camp Bonneville.

2.4.3 Operational Status

2.4.3.1 Through the 1980's and 1990's, numerous civilian groups and organizations have used portions of Camp Bonneville for camping, picnics, and environmental studies. All active training units ceased operations at Camp Bonneville by October 1995, and by November 1996 the cancellation of all out-grants for use of the post facilities was started. This action, however, did not include the FBI Range. The FBI continues to train at Camp Bonneville under the current reuse proposals.